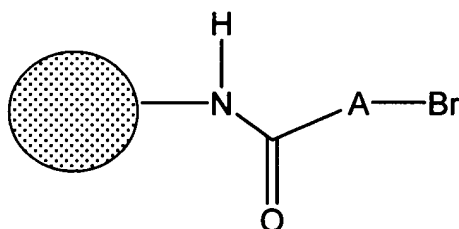


AMENDMENTS TO THE CLAIMS

Claims 1-9 (Cancelled)

10. (New) A method for preparing a supported catalyst component for the production of hollow beads of polyethylene comprising:

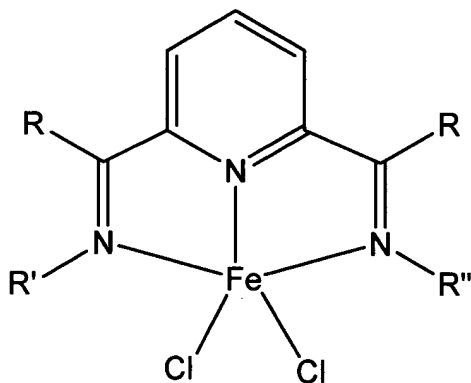
(a) providing porous functionalized beads of polystyrene characterized by the formula:



wherein:

A is a substituted or unsubstituted alkyl group having from 2 to 18 carbon atoms providing a flexible arm;

(b) dissolving an iron-based complex characterized by formula I in a solvent:



wherein:

R is an alkyl group having from 1 to 20 carbon atoms;

R' and R" are the same or different and are each a substituted or unsubstituted alkyl group having from 1 to 20 carbon atoms, an unsubstituted aryl group or a substituted aryl group having substituents having from 1 to 20 carbon atoms;

(c) saturating the bead of subparagraph (a) with the solution of subparagraph (b);

(d) thereafter evaporating the solvent; and

(e) retrieving dry beads of the supported catalyst component.

11. **(New)** The method of claim 10 wherein R is an alkyl group having from 1 to 4 carbon atoms.

12. **(New)** The method of claim 11 wherein R is a methyl group.

13. **(New)** The method of claim 10 wherein R' and R" are the same and are substituted or unsubstituted phenyl groups.

14. **(New)** The method of claim 13 wherein R' and R" are substituted phenyl groups in which the substituents are isopropyl groups in positions 2 and 6.

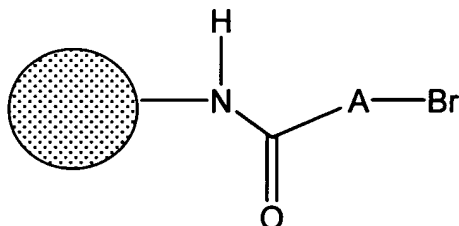
15. **(New)** The method of claim 13 wherein R' and R" are substituted phenyl groups in which the substituents are methyl groups in positions 2, 4 and 6.

16. **(New)** The method of claim 13 wherein R' and R" are unsubstituted phenyl groups.

17. (New) A supported catalyst component produced by the process of:

(a) providing porous functionalized beads of polystyrene characterized by the

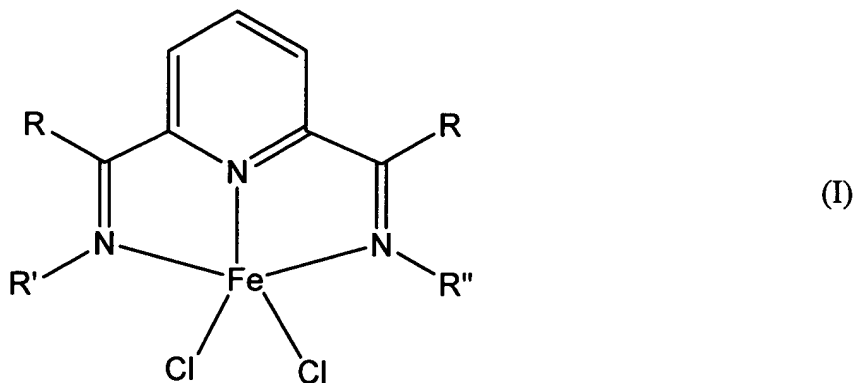
formula:



wherein:

A is a substituted or unsubstituted alkyl group having from 2 to 18 carbon atoms providing a flexible arm;

(b) dissolving an iron-based complex characterized by formula I in a solvent:



wherein:

R is an alkyl group having from 1 to 20 carbon atoms;

R' and R'' are the same or different and are each a substituted or unsubstituted alkyl group having from 1 to 20 carbon atoms, an unsubstituted aryl group or a substituted aryl group having substituents having from 1 to 20 carbon atoms;

(c) saturating the bead of subparagraph (a) with the solution of subparagraph

(b);

- (d) thereafter evaporating the solvent; and
- (e) retrieving dry beads of the supported catalyst component.

18. **(New)** A supported catalyst system comprising the supported catalyst component of claim 20 and an activating agent.

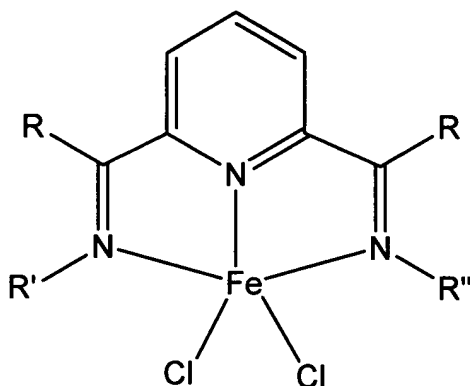
19. **(New)** The supported catalyst system of claim 18 wherein said activating agent is an alumoxane.

20. **(New)** The supported catalyst system of claim 18 wherein said activating agent is an aluminum alkyl.

21. **(New)** The supported catalyst system of claim 20 wherein said aluminum alkyl is diethyl aluminum chloride.

22. **(New)** A method for preparing hollow beads of polyethylene comprising:

(a) providing a supported catalyst component having a support comprising porous functionalized beads of polystyrene and a catalyst component impregnated on the support and comprising an iron-based complex of the formula;



(b) activating the supported catalyst component with an activating agent;

(c) feeding an ethylene monomer to a reaction zone containing said activated supported catalyst component;

(d) maintaining said reaction zone under polymerization conditions to polymerize said ethylene monomer; and

(e) retrieving hollow beads of polyethylene from said reaction zone.

23. **(New)** The supported catalyst system of claim 22 wherein said activating agent is an alumoxane.

24. **(New)** The supported catalyst system of claim 22 wherein said activating agent is an aluminum alkyl.

25. **(New)** The supported catalyst system of claim 24 wherein said aluminum alkyl is diethyl aluminum chloride.